

T H E  
M O R L E Y - M A R T I N  
E X P E R I M E N T S

-- and --

THE EXPERIMENTS OF DR. CHARLES W. LITTLEFIELD

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Including:

B I O - G E N E S I S  
(Extracts from The Beginning and Way of Life  
by Dr. Charles W. Littlefield, M. D., 1919)

&

T H E  
B I O N E X P E R I M E N T S  
O F

W I L H E L M R E I C H  
(by Alison Davidson)

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"Now is the axe laid to the root of  
the tree" -

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I -

THE MORLEY-MARTIN EXPERIMENTS

Flying Roll Alpha III (March, 1948) carried an article entitled The Littlefield Experiments, describing the investigations of Dr. Charles W. Littlefield of Seattle, as set forth in his book, "M.M.M." (1937). The gist of this matter was, that the crystallization of solutions of the organic salts could be modified by mental energy, directed through meditation or the use of mantrams -and that the crystals could be made to assume a great variety of shapes, such as letters, human-like figures, a map, an open book, a pyramid, a serpent, or a crown. All these figures were of course microscopic in size ( the maximum field diameter being  $1/32"$ ), but a great many photographs were taken, and a considerable number o f these are reproduced in the book. Dr. Littlefield claimed also that "the subtle magnetism which is the vital force" of all living things, is generated by the evaporation of water, and that the saturation of organic mineral salts by this magnetism rendered them susceptible to mental control. Strange as these assertions may sound, it is difficult to explain the evidence of the photographs by any available hypothesis.

Dr. Littlefield also adds, somewhat casually, that on one occasion "a living octopus was produced" on t h o microscope slide. Since this first Flying Roll article was written, one of our F.R. Associates has sent the editor the larger work by Dr. Littlefield, entitled "The Beginning and Way Of Life", and in this the production of organic forms is treated at length. The development of microscopic octopi is shown in ten photographs, and there are many plates showing forms of fish and reptiles and even shapes which are plainly and undeniably those of human or human-like beings - homunculi indeed, beneath the cover-glass of a microscope slide! These forms are, as we have said, organic - but Dr. Littlefield does not, so far as this writer has discovered, speak of them as actually living - i.e., as showing independent movement, assimilation or reproduction. His own thesis is, that "a mind-image of a form possesses the power to group the elements of organic life in the exact proportion necessary to build an organism like itself, endowed with all the functions and attributes that are embodied in the mental picture". B u t this does not mean that all these numerous o r g a n i c forms were produced in response to a deliberate mental demand and image, or any conscious effort on the part

of the observer. Many forms, apparently, can be produced in that way; nevertheless the organic mineral salts, after having been vitalized by a series of evaporations, will crystallize into both organic and inorganic shapes, as if 'of themselves' - that is, in obedience to some other power than that of a consciously held mental image.

We appear, in short, to have here (1) a spontaneous creative action of a life-force (2) the possibility of directing this life-force by mental action, with conscious intent (3) the chance that the subconscious mentation (if there be such a thing) of the experimenter may also produce specific forms (as perhaps it does in "thought photography").

We should also mention here, because of similar facts reported by Morley-Martin, that complete shell forms, both of fresh and salt water, also arise from the solutions of mineral salts. These, however, grow from droplets, as single cells, while the organic forms grow from droplets by a process of 'cell-division.'

But even in the case of the living octopus, Dr. Littlefield does not wish to speak of the "spontaneous generation of life." This phrase, he says, is meaningless. "Life arises from a complex cooperation of energy - psychical and physical - with matter" (p 171) "In the grouping of mineral compounds and the environmenting forces lies the cause of all physical life-forms - this is the underlying principle of abio-genesis" (p. 176).

We do scant justice to the 600-odd pages of this book - but it is packed with facts, evidence and arguments utterly destructive of the biological creed originating with Huxley, Darwin, Tyndall, and Haeckel -- that all forms of life come from one original cell, the origin of which is unknown, that life comes only from antecedent life and that 'spontaneous generation' is impossible. Abiogenesis, by Dr. Littlefield's evidence, is a fact, and life-forms as known to us are emergents out of energy-complexes, hence are themselves energy-forms. This, however, is not at all the concept embodied in the phrase "spontaneous generation" - if the words make any sense at all, which is doubtful. "Antecedent life" is indeed a postulate, but it is life in the sense of the action of cosmic energy, and not as Huxley and Darwin understood the term.

Or such, at any rate, we understand to be Dr. Littlefield's position. And the factual data he presents are incredible and devastating - and have been consistently ignored. They were widely publicized at the time, yet we do not know of any standard work in the biological sciences which now takes account of them.

We come now to the proper topic of this article, the Morley - Martin Experiments. Professor Charles J. Ryan, of the Theosophical University at Covina, took note of the article on the Littlefield experiments, and sent the present writer a work by Maeterlinck, La Grande Porte, which contains a chapter dealing with Morley - Martin, and called attention to articles by himself in The Theosophical Path. There is probably nothing more astonishing, and more disruptive of orthodox scientism, in the whole field of modern discovery, than the Morley - Martin reports - many of which came to Professor Ryan direct from that scientist himself. They i n tegrate closely with the work of Dr. Littlefield a n d should be studied in that connection. Their implica - tions reach out in every direction, and are particularly important in connection with 'occult' and esoteric concepts concerning the nature of matter and energy, the origin of life, the meaning of evolution, and the innumerable related problems which confront us a t every turn. But it is not for the present writer to attempt any profitable comment on such material; w e reproduce the larger part of Maeterlinck's chapter from La Grande Porte, and a portion of Professor Ryan's extremely valuable articles. These data are extremely important, and neither occultists nor physical scientists can afford ignorance of them, nor to let them lie in neglect.

## - II -

MAETERLINCK'S ACCOUNT

Translation from  
La Grande Porte  
 Paris, 1939. pp.  
 236 ff.

There died last year at South Harrow, a London suburb, a biological chemist named M o r l e y - Martin, who made at Andover, a small town of five or six thousand inhabitants in Hampshire, the most extraordinary discovery that science may have (or rather will have) to record since Newton's gravitation and the discovery of radium and all that followed.

Impelled by an indescribable prevision of genius, he acquired little by little the conviction that plants and animals, at least the vertebrates and principally the fishes, continue to live in miniature and in a latent state in the rocks which geologists call azoic, many millions of years old, which constitute the earliest crust of the globe and in which no traces of organisms have been found. In brief, he believed that he had proved that life is immortal, universal, and indestructible; and that the mother-Idea, the image or prototype of everything, is anterior to what we call matter.

He awakened or revealed, like the development of a photograph - or caused to emerge from the depths of their shadowy millenniums, animal forms such as we know, mingled with others which no longer exist, or do not yet exist on earth but await their turn in the storehouse of Nature; and by vigorous condensations and chemical transmutations he reproduced them, as he said, "in the way they probably came out from the fire-mist or the gas of our nebula."

He began his research in 1927, and dedicated the small fortune he had acquired as the proceeds of his patents to the establishment of his laboratory, and in spite of general indifference and misunderstanding - ing carried on his experiments to the end of his life.

Fearing, not unreasonably, that his discovery might be stolen from him before he had time to give it the final touches, he guarded the secret of his process and manipulations. Has he deposited it in the two registers which have not yet been deciphered, or in note-books which have not yet been found? This is quite possible, as his heirs have not yet completed the complicated inventory of his estate.

In the meantime, we only know that which he was willing to confide to friends or to scientists who were interested in his work.

Although we do not know the formulas which enabled him to isolate the "primordial protoplasm" of the mineral kingdom, the following is a brief statement of his method of work. He took a fragment of azoic rock or a bit of glass and submitted it to a temperature of 2-3000 degrees Fahrenheit in an electric oven. M. Maurice Genette, his friend and confidant tells us "on coming out of the oven, the material has the appearance of very light ash containing scoria. It is from these ashes and from minerals treated in the autoclave (evaporating dish?) at 220 degrees that he isolated by a series of reductions what he called "primordial protoplasm", having the property of weakening or even suppressing the spectral lines of the precious metals, gold for instance. I do not know the nature or the number of the reductions, but I know that this 'primordial protoplasm' had the possibility of being transformed into crystalloides under the influence of Canada Balsam which absorbed its moldiness (?) (moissures).

After some months of observation under non-actinic light the crystalloids released a liquid which ran through the glass (traversait le verre). Then the whole thing, vessel and contents, was submitted to a radiation at the velocity of light (X-ray or ultra-violet), and the crystalloids, condensing in the direction of their diagonals as they disengaged themselves, gave birth to numerous organisms.

Photographs were taken by means of the X-ray with a 1/8" objective, because ordinary light powerfully affects these formations.

In a diameter of one inch Morley-Martin counted about 15,000 microscopic fishes proceeding from forty crystals. The enlargement was from about 500 to 1,200 diameters.

According to Morley-Martin, the experiments were made under perfect conditions of sterilization. It is, moreover, impossible up to now to show the existence of any micro-organisms in air except unicellular ones. There is no doubt that in these experiments we have to do with multicellular animals which have differentiated tissues, visible in a microscopic state. Even in the suggested case of trickery (which the high moral character of the deceased throughout his whole life compels us to dismiss) we cannot see how a microscope magnifying two or three thousand times could show within its field hundreds of fishes, insects, plants, etc. It is such things that witnesses have been able to observe on Morley-Martin's glass slides."

I have had to quote textually one of the communications of M. Genette, since the expressions he uses are drawn direct from letters addressed to him by Morley-Martin.

We may add that at the outset of Morley-Martin's experiments it usually took two years to reach a result which at the end of his career he obtained in 48 hours.

Under the enlargement of the microscope globules were seen taking shape within the protoplasm and forming vertebrae which then elongated into a spinal column in which the ribs were inserted; then came the outlines of the limbs or claws, the head, and the eyes. These transformations are normally slow and require several days, but at times they took place under the eyes of the observer. One crustacean, for example, having developed its legs, walked off the field of the microscope.

These emergents therefore live, sometimes move, and develop as long as they find sufficient nourishment in the protoplasm in which they were born; after that, their growth is checked or else they devour one another. Morley-Martin has, however, succeeded in feeding them by the help of a serum whose secret he kept, and which must, according to M. Genette, come from the bacteria, aerobic micro-fungi which are absorbed when the high temperatures partially dissolve the atoms of the minerals used.

There is something still more remarkable. When these living emergents are put back into the residuum in the electric oven at 1200 degrees, they reform and recommence to develop as if nothing had happened, positively demonstrating that they are really indestructible, immortal, and unable to be destroyed by sterilization. That which ought to destroy them reawakens them to life.

In other words, the calcined particles, and, a fortiori, every other particle, are lives which await the moment when they may move and manifest themselves. All is life, and nothing exists which is not alive.

In 1935 Morley-Martin was fishing for barbel in a lake in Michigan. He incinerated the head of one at 900 degrees centigrade, and in the ashes he succeeded in isolating some hundreds of microscopic barbels, identical with those of normal size. He concluded from this experiment that these êtres protéiques are colonies of other entities similar but of an inferior class (ordre inférieur), and that they are the ones that work



in the living cells. He added that the latter are universes relatively to electrons, and that the latter in their turn would be universes in comparison with the vital center of every vertebrate. . .

Surprised by death, Morley- Martin had published only a small brochure entitled The Reincarnation of Animal & Plant Life from Protoplasm Isolated from the Mineral Kingdom; (Jan. 1934). . . On the sixth of July 1931, M. Bernard Laporte devoted an excellent article to the subject, in le Matin. Another article appeared in an English journal, and on the 10th of July, 1936, we find a remarkable study by Charles Richard in l' Intransigeant.

And what are the explanations and thoughts of Morley-Martin himself... Here are certain statements drawn from letters addressed by him to M. Genette, between 1931 and 1937. According to Morley-Martin, the forms which he awakened from their immemorial slumbers are the reincarnations of a specific force, determinate and eternal. Life is not an expression of the forces of the body; the body is the expression of a vital force, pre-existent and indestructible. He thinks that the vertebrates existed upon our planet before land or sea, and even (if I may complete his idea) before the sun and the nebula from which it issued became visible. He does not say with Huxley that protoplasm is the physical basis of life, but the physical basis for life. "I do not reanimate", he says, "because life never ceases. The animal loses its body but does not lose its life." There is, he adds, as azoic and igneous rocks as in the sedimentary or fossil-bearing. Some vertebrates arose from rocks in which no fossil ever existed. There is nothing without life, and no form of life is ever extinguished. Nothing dies, and the identity of animal life survives even after assimilation in a plant, where it can be reawakened. One cannot create what one cannot destroy. The fish that I draw out of their shadows are microscopic - but what is extension in space? A whale will remain a whale even if microscopic. The same vertebrates can be created in a series of different shapes. My vertebrates are not born from cells but by the action of a Fiat which exists in the protoplasm. The contrary of life is not death, but latency. Man lies latent in the rock. The total of embodied life upon this earth is negligible compared to the life which has no body. There is no division into organic and mineral kingdoms. There is only one universal

substance revealed to us by an incessant play of forms - our senses perceive only a minute fraction of the whole process.

III - Comments of Professor C.J. Ryan, from The Theosophical Path. Vol. xliv - 3: p. 316 ff.

"At first sight the claim" (of Morley-Martin) "seems incredible, especially to the orthodox Darwinian evolutionist. If highly organized life forms, or even their potencies, have existed in latency during and since the early fire-mist period, what becomes of the mechanistic theory of evolution in which new forms can only be produced in successive stages of greater and greater complexity, from the lowly jelly-speck to man, by the blind force of 'natural selection' and the 'survival of the fittest'? How could vertebrates exist before there was either land or sea? ... It is no wonder that Mr. Morley-Martin has found many difficulties in his way....

"The alternatives in the case are either that life can be helped to reconstruct its original forms after ages of latency (by the releasing power of intense heat, perhaps, as one factor), or some more prosaic explanation for the emerging protoplasmic animals will be found... The Ancient Wisdom speaks of numerous ethereal (astral) or archetypal root-types, plant and animal, which existed in extremely distant times, when the earth was in a very different condition of materiality." "This was the Third Round of Terrestrial evolution. These root-types, ethereal but perfectly real entities, living "shadowy lives in shadowy conditions", were gradually projected, as it were, into the physical world as it became able to provide the necessary conditions - first the simplest forms of marine life and then the more complex, then fishes, then the reptiles and so on, until the great rush of cenozoic plants and mammals ushered in modern conditions and physical man. As the influence of the incarnating basic root types, the great genera, was felt in the world, the well-known minor factors came into play, such as natural selection, isolation, etc... We find evidence of a general increase of complexity in the fossils combined with occasional fairly rapid changes.... All this was according to a great Cosmical Plan and not the result of blind forces acting fortuitously on matter. Life and consciousness are universal. Mr. Morley-Martin's hypothesis that the life force is primordial and can manifest in its original forms when the r i g h t

conditions are provided, is a remarkably close approach to the Theosophical scheme of evolution....

'Mr. Morley-Martin is not the first who has tried such experiments. Elias Ashmole, one of the charter members of the Royal Society, in the 17th century, describes the restoration of the form of a plant which had been completely destroyed, and the homunculi of Paracelsus are well-known in occult literature. Even in the 19th century the idea of the production of fairly advanced life-forms from inert, sterilized and intensely heated mineral matter was not abandoned. H.P. Blavatsky took the matter very seriously' --

(Professor Ryan here quotes from The Theosophist, Vol. vi, p.5, 1884; and from Isis Unveiled, Vol. 1, p. 465. In the quoted paragraph, HPB refers to the experiments of a Mr. Weeks, who obtained acari in ferrocyanide of potassium, and particularly to the studies of Andrew Crosse, which are described further on in this article. Crosse showed his acari (minute insects of the spider family) to the members of the Royal Society "and was received about as favorably as Sir William Crookes when he offered the results of his careful scientific experiments into psychic phenomena at a rather later date." (C.E.R.) ...'The Master K.H. also seems to approve the claim that organisms will spring up spontaneously in certain solutions previously free from life.'

(We take occasion to add here, that communicators at the Mark Probert seances, currently being held in San Diego, have made similar assertions, to the effect that what appears to be 'spontaneous generation' of life is constantly taking place -- that is, that life arises where no previous life-form is believed to exist, or to be possible, as in thoroughly sterilized solutions. That is not to say, of course, that the life-force itself appears de novo, but only the form in which it manifests. - But the effect of the experiments described in this article is to suggest that the actual physical form of fish, mite or spider, or of a flower or a shell, is also in some way latent and eternal, and can and does reappear under favorable conditions. The microscopic spider or octopus is not only an emergent, but a re-emergent; the 'same' life energy appears again, after millions of years, in the 'same' form - since it differs only in size. And as Morley-Martin remarks, 'what is extension in space? A whale remains a whale' whether it be forty feet in length or visible only under a microscope).

From The Theosophical Path:  
Vol. xliiv - 4: p. 468 ff. (April 1935).

'Mr. Morley-Martin is strictly scientific in his methods of work... and has carefully considered the criticisms of fair-minded scientists....with regard to the actual results obtained by him the evidence is very strong... But this claim of bringing into visibility and sometimes into active motion forms of plants and animals whose physical frames perished ages ago, is to a modern scientist almost incredible. But, as he says

"If the life of the cosmos expresses itself in living forms, and if a vertebrate can survive in more ethereal form, it must survive somewhere and await another manifestation. This does not seem to contradict the Theosophical position.

Not fundamentally, but Theosophists would not say that any particular vertebrate survives per se, i.e., as an individual of that form. The Monad which incarnated as the vertebrate never perishes, but changes form and develops new powers from within as it evolves. It is not a reincarnation of the original form but of that which is behind many forms. This, however, does not contradict the possibility that the original form of the vertebrate may persist and be artificially re-clothed in matter... But this is not true reincarnation as Theosophists define it....

'It looks probable that through experimentation on these lines materialistic biology may receive as severe a blow as that which destroyed the old materialistic physics when the electric nature of matter revealed.... The scientific concept of protoplasm (Morley-Martin tells us) has been muddled by spurious definitions. True protoplasm, his "mineral primordial protoplasm" is free from proteins and can be extracted from chalk, silica, etc. After long sterilization by acids extremely high temperatures and other means, it is capable of producing numerous low forms of life, such as diatoms, crustaceans, and algae, and even some higher ones which are vertebrate, such as fishes, possibly reptile' (compare here the 'living octopus' which Dr. Littlefield discovered on his slide and photographed in its various stages). 'They are mostly microscopic in size, and often are built up under observation as if an invisible pattern were being filled in, sometimes slowly, sometimes very rapidly. . . Actinic light has a very destructive effect and they seek to hide from it at times. It is the variation in chemical composition (writes Morley-Martin) t h a t d e t e r m i n e s

by some innate law, the kind of animal that can form. The methods used entirely negative the possibility of contamination; beside which, certainly no air-borne germs can produce such forms of life as comatulae or fishes....Germs require proteids for nourishment...also, when Morley-Martin exposed his mineral protoplasm to the air, microscopic examination showed nothing of these living emergents....

'As to spontaneous generation ... for over 150 years scientists have worked on this idea, and long is the list of distinguished names of those who have tried to demonstrate its possibility.' (Professor Ryan here quotes from Morley-Martin concerning the studies of Andrew Crosse, and the conformity of his observations with those made by himself, and goes on to say: "Crosse's experiments were confirmed by those of Weeks of Sandwich .... followed by Farraday at the Royal Institution stating in a paper that similar results had been obtained by him, but he was unable to say whether they should be considered 'production' or 'revivification'. Neither of them had conjectured that specific life could exist as a life force in what they naturally considered lifeless matter"). 'Morley-Martin then discusses Huxley's famous Bathybius Haeckelii, a colloidal substance found at the bottom of deep seas, and originally supposed by Huxley to be 'an organism without organs' but ultimately announced by others to be nothing but lime carbonate. Morley-Martin, however, is firm in his belief that Huxley was largely right in believing that it is living material ...Next comes Dr. Charlton Bastian, F.R.S., who in 1870 made valiant attempts to create life de novo. Bastian's experiments aroused a furious controversy, and were explained away by Tyndall, as being caused by the intrusion of dust particles... But no one, except perhaps Crosse to a degree, has produced anything so striking as Mr. Morley-Martin's experiments - and Crosse speaks of only one species.' Finally, Professor Ryan points out that possibly these emergents are precipitations or materializations of forms latent in the 'astral light' - and that they may also be connected with the action of Elementals, rather than with the 'personality' of a long-dead animal. In any case they cannot be accepted as instances of reincarnation, in the sense of being stages in true monadic evolution.

(Professor Ryan's article runs to some nine pages of the PATH, and we have done little more than to summarize some of his principal points. ml)

IV - Experiments of Andrew Crosse:ANIMAL LIFE BY ELECTRICITY

(A Description of Mr. Crosse's Experiments; Compiled by Peter Davidson, F.T.S., from "Memorials of Andrew Crosse", by Mrs. C.H.A. Crosse (London, 1957); and "A History of the Thirty Years Peace, 1815 - 1846", (London 1849), by Harriet Martineau. The Description appeared in The Theosophist for October 1884. It consists of extracts from letters written by Andrew Crosse to the well-known author Harriet Martineau, and to his wife. Flying Roll is indebted to Professor C.J. Ryan, of the Theosophical University at Covina, for the following quotation and foregoing references).

"In the course of my endeavors to form artificial minerals by a long-continued electric action on fluids holding in solution such substances as were necessary to my purpose, I had recourse to every variety of contrivance....so that, on the one hand, I might be able to keep up a never-failing electric current of the strength required, and on the other, that the solutions used should be exposed to the electric action in the manner best adapted to the object in view... I constructed a wooden frame about two feet in height, consisting of four legs proceeding from a shelf at the bottom, supporting another at the top, containing a third in the middle.

"Each of these shelves was about seven inches square. The upper was pierced with an aperture in which was fixed a funnel of Wedgewood ware, within which rested a guard basin, on a circular piece of mahogany placed within the funnel. When this basin was filled with a fluid a strip of flannel wetted with the same was placed over the edge of the basin, and inside the funnel, which acting as a siphon conveyed the fluid out of the basin through the funnel in successive drops. The middle shelf of the frame was likewise pierced with an aperture in which was fixed a smaller funnel of glass, which supported a piece of somewhat porous red oxide of iron from Vesuvius, immediately under the dropping of the upper funnel. This stone was kept constantly electrified by means of two platina wires on either side of it, connected with the poles of a voltaic battery, of 19 pairs of 5" zinc, and copper-zinc plates, in two porcelain troughs, the cells of which were filled at first with water and 1/500 th part of hydrochloric acid, but afterwards with water alone. . . In all subsequent experiments relative to these insects I filled the cells

of the batteries with nothing but common water. The lower shelf merely supported a wide-mouthed bottle to receive the drops as they fell from the second funnel. When the basin above was nearly emptied the fluid was poured back again from the bottle below into the basin above, without disturbing the position of the stone. It was by mere chance that I selected this volcanic substance, choosing it from its partial porosity; nor do I believe that it had the slightest effect in the production of the insects to be described. The fluid with which I filled the basin was made as follows: - I reduced a piece of black flint to powder, having first exposed it to red heat and quenched it in water to make it friable. Of this powder I took two ounces, and mixed it intensely with six ounces of carbonate of potassa, exposed it to strong heat for 15 minutes in a black lead crucible, in an air furnace, and then poured the fused compound on an iron plate, reduced it to powder while still warm, poured boiling water on it, and kept it boiling for some minutes in a sand-bath. The greater part of the soluble glass thus fused was taken up by the water, together with a portion of alumina from the crucible. I should have used one of silver but had none sufficiently large. To a portion of the silicate of potassa thus fused I added some boiling water to dilute it, and then slowly added hydrochloric acid to supersaturation.

A strange remark was made on this part of the experiment, at the meeting of the British Association at Liverpool - 'that it was impossible to add an acid to silicate of potassa without precipitating the silica.' This of course must be the case, unless the solution be diluted with water. My object in subjecting this fluid to a long-continued electric action through the intervention of a porous stone, was to form, if possible, crystals of silica at one of the poles of the battery, but I failed to accomplish this by these means.

On the 14th day from the commencement of the experiment I observed through a lens a few small whitish excrescences, or nipples, projecting from the middle of the electrified stone, nearly under the dropping of the fluid above. On the 18th day these projections enlarged, and 7 or 8 filaments, each of them longer than the excrescences from which it grew, made their appearance on each of the nipples. On the 22nd day these appearances were more elevated and distinct, and on the 26th day each figure assumed the form of a perfect insect, standing erect on a few bristles which formed its tail. Till this period I had no notion that these appearances

were any other than an incipient mineral formation; but it was not until the 28th day, when I plainly perceived these little creatures move their legs, that I felt any surprise, and I must own that when this took place I was not a little astonished. I endeavored to detach some from their position on the stone, but they immediately died, and I was obliged to wait for a few days longer, when they separated themselves from the stone and moved about at pleasure, though they had been for some time after their birth apparently averse to motion. In the course of a few weeks about a hundred of them made their appearance on the stone. At first each of them fixed itself for a considerable time in one spot, appearing to feed by suction. But when a ray of light from the sun was directed upon it, it seemed disturbed and removed itself to the shaded part of the stone. Out of about 100 insects, not above 5 or 6 were born on the south side of the stone. I examined some of them with the microscope and observed that the smaller ones appeared to have only six legs, but the larger ones, eight. It seems they are of the genus *Acarus*, but of a species not hitherto observed. I have had three separate formations of similar insects at different times, from fresh portions of the same fluid, with the same apparatus.

As I considered the results of these experiments rather extra-ordinary, I made some of my friends acquainted with them, amongst whom were some highly scientific gentlemen, and they plainly perceived the insects in various states. I never ventured an opinion as to the cause of their birth, and for a very good reason: I was unable to form one. The most simple solution...was that they arose from ova deposited by insects floating in the air, and that they might possibly be hatched by electric action. Still, I could not imagine that an ovum could shoot out filaments and that these would become bristles; and moreover, I could not detect on the closest examination any remains of a shell. Again, we have no right to assume that electric action is necessary to vitality, until such fact shall have been most distinctly proved. \* I next imagined, as others have done, that they might have originated from the water, and consequently made a close examination of several hundred vessels filled with the same water as that which held in solution the silicate of potassa, in the same room, which vessels constituted the cells of a large voltaic battery, used without acid. In none of these could I perceive the trace of an insect of that description. I likewise closely examined the crevices and most dusty parts of the room, with no better success.

(\* next page)



"In the course of the same month, indeed, these insects so increased that when they were strong enough to leave their moistened birthplace, they issued out in different directions, I suppose in quest of food; but they generally huddled together under a card or piece of paper in their neighborhood, as if to avoid light and disturbance. In the course of my experiments upon other matters, I filled a glass basin with a concentrated solution of silicate of potassa, without acid, in the middle of which I placed a piece of brick, used in the neighborhood for domestic purposes, and consisting mostly of silica. Two wires of platina connected either end of the brick with poles of a voltaic battery of 63 pairs of plates, each about two inches square. After many months of action, silica in a gelatinous state formed in some quantity around the bottom of the brick, and as the solution evaporated I replaced it by fresh additions, so that the outside of the glass basin being constantly wet by repeated overflowings, was of course constantly electrified. On this outside as well as on the edge of the fluid within I one day perceived the well-known whitish excrescence with its projecting filaments. In the course of time they increased in number, and as they successively burst into life, the whole table on which the apparatus stood was at last covered with similar insects, which hid themselves wherever they could find a shelter. Some of them were of different sizes, there being a considerable difference in this respect between the large and the smaller; and they were plainly perceptible to the naked eye as they nimbly fled from one spot to another. I closely examined the table with a lens, but could perceive no such excrescence as that which marks their incipient state, on any part of it.

"While these effects were taking place in my electric room, similar formations were making their appearance in another room, distant from the former. I had here placed on a table three voltaic batteries unconnected with one another. The first consisted of 20 pairs of 2" plates, between the poles of which I placed a glass cylinder filled with a concentrated solution of silicate of potassa, in which was suspended a piece of clay slate by two platina wires connected with either pole of the battery. A piece of paper was placed on the top of the cylinder to keep out the dust.

Note, by H.P. Blavatsky: For ages the occult doctrine teaches that life is vital electricity, and the latter the real life-giver, the creator of all.

After many months of action, gelatinous silica in various forms was electrically attracted to the slate, which it coated in rather a singular manner, unnecessary here to describe. In the course of time I observed similar insects in their incipient state forming around the edge of the fluid within the jar, which when perfect crawled about the inner surface of the paper with great activity.

"The second battery consisted of many pairs of cylinders, each connected to a 4" plate. Between the poles of this I interposed a series of seven glass cylinders filled with the following concentrated solutions: (1) nitrate of copper (2) subcarbonate of potassa (3) sulphate of copper (4) green sulphate of iron (5) sulphate of lime (6) water acidified with a minute portion of hydrochloric acid (7) water poured on powdered metallic arsenic, resting on a copper cup, connected with the positive pole of the battery. All these cylinders were electrified and united together by arcs of sheet copper, so that the same electric current passed through the whole of them. After many months action, and consequent formation of certain crystalline matters which it is not my object here to notice, I observed similar excrescences with those before observed, at the edge of the fluid in every one of the cylinders, excepting the two which contained the carbonate of potassa and the metallic arsenic; and in due time a host of insects made their appearance. It was curious to observe the crystallized nitrate and sulphate of copper, which formed by slow evaporation at the edge of the respective solutions, dotted here and there with the hairy excrescences. At the foot of each of the cylinders I had placed thick paper upon the table, and upon lifting them I found a little colony of insects under each, but no appearance of their having been born under their respective papers, or on any part of the table.

"The third battery consisted of 20 pairs of cylinders, each equal to a 3" plate. Between the poles of this I interposed likewise a series of six glass cylinders filled with various solutions, in only one of which I obtained an insect. This contained a solution of silicate of potassa. A bent iron wire  $1/5$ " in diameter, was plunged some inches into this solution, and connected it with the positive pole, whilst a small coil of fine silver wire joined it with the negative. I have obtained the insects on a bare platina wire plunged into fluo-silicic acid, one inch below the surface of the fluid at the negative pole of a small battery of 2" plates, in cells filled with water. This is a somewhat singular fluid for these insects to breed in, who seem to have a flinty

taste, though they are by no means confined to silicious fluids. This fluo-silicic acid was procured from London some time since, and consequently made of London water, so that the idea of their being natives of the Broomfield water is quite set aside by this result.

"The apparatus was arranged as follows: - A glass basin (a pint one) part filled with fluo-silicic acid to the level, a small porous pan, made of the same material as a garden pot, partly filled with the same acid to the level, with an earthen cover placed upon it to keep out light, dust, etc., a platina wire connected with the positive pole of the battery, with the other end plunged into the acid in the jar and twisted round a piece of common quartz; on which quartz after many months action are forming singularly beautiful and perfectly formed crystals of a transparent substance, not yet analyzed, as they are still growing. These crystals are of the modification of the cube, and are of 12 or 14 sides. The platina wire passes under the cover of the pan; a platina wire connected with the negative pole of the same battery, with the other end dipping into the basin an inch or two below the fluid, and, as well as the other, round a piece of quartz.

"By this arrangement it is evident that the electric fluid enters the porous pan by the wire, percolates the pan, and passes out by the wire. It is now upwards of six or eight months since this apparatus has been in action, and though I have occasionally lifted out the wires to examine them by a lens, yet it was not till the other day that I perceived an insect, and there are now three of the same insects in an incipient state appearing on the naked platina wire, at the bottom of the quartz in the glass basin of the negative pole. These insects are very perceptible. It should be observed that the glass basin is always covered loosely with paper. The incipient appearance of the insects has already been described. The filaments which project are in course of time seen to move, before the perfect insect detaches itself from its birthplace."

Considerable information about Crosse is to be found in the book ODDITIES - A BOOK OF UNEXPLAINED FACTS, by Lieut.-Commander Rupert T. Gould, R.N. (London, Philip Allan & Co., Ltd. 1928. P. 180 ff.) His sources are those already mentioned, the MEMORIALS written by (Mrs.) C.H.A. Crosse, and the account in Harriet Martineau's HISTORY, but he includes interesting personal facts concerning Crosse, some of which we here set down).

CROSSE'S ACARI - from ODDITIES:

- V -

"Until 1836 the English public had never heard of Andrew Crosse. A small circle of friends knew that he lived at a rather dilapidated country-seat in the Quantock Hills, where he spent his time and what money an encumbered estate allowed him, in electrical experiments. His rustic neighbors spoke of him as the "thunder and lightning man" and shunned his house like the plague, especially after nightfall, it being a matter of common notoriety that devils, surrounded by lightning, were then to be seen dancing upon wires encircling its grounds.

"By the end of 1837 he was being reviled from one end of England to the other. He was an atheist; a blasphemer, a "reviler of our holy religion", a "disturber of the peace of families", a modern Prometheus, a would-be Frankenstein, a man who had presumptuously tried to rival the God that made him - and many others of those flowers of speech that fell like leaves in Vallombroso during the progress of religious or quasi-religious controversies.

"Who was this dreadful person, and what had he done?

"He was a simple, honest and God-fearing man, belonging to a class very common in the last century but increasingly rare in this. In other words, he was a scientific amateur, having the time and money for prolonged experimental work, but gravely handicapped by a lack of scientific training and an almost complete ignorance of the work of other men in the same field.

"His offense - which, incidentally, he had not committed - was of an unusual kind. He was accused of having attempted to create living creatures, by an electrical process, from dead matter. Indeed, it was further laid to his account that he had succeeded in doing so, and had evolved in poisonous solutions fatal to all normal animal life, numbers of insects of the species *Acarus* (mites), which lived, moved, and bred.

"Actually, he had done this. But he had not done it designedly, and whether what he had done was, in effect, an artificial production of life, remained and remains an open question, which he did not attempt to answer... "I have never claimed any merit as attaching to these experiments. I was looking for silicious formations, and acari appeared instead...."

"The obloquy so freely showered upon Crosse left him unmoved; knowing it to be undeserved, he could afford to despise it. But it had one definitely evil effect - the result of all such persecutions. It prevented Crosse from publishing, or even communicating his further work on the same subject. Extensive though that work was, very little record of it, or of the original experiments, has survived."

(Commander Gould then quotes passages descriptive of the experiments, the gist of which has already been noted in section III of this present article. "The acari thus produced" (writes Crosse) lived generally until the first frost, which was invariably fatal to them." Crosse also produced acari in an atmosphere strongly impregnated with chlorine; these were completely formed and remained without decomposition for two years, but never moved or showed any signs of life).

These experiments by Crosse, says Commander Gould, were repeated and extended by "another enthusiastic amateur, Weeks of Sandwich", who seems to have taken every thinkable precaution with regard to sterilization; nevertheless "after about a year and a half of electrification" the acari appeared. Control experiments with the same apparatus but without electric current gave uniformly negative results - no acari appeared. Weeks also made quantitative tests and found that "the number of acari electrically produced varied, roughly with the percentage of carbon in his solutions." A summary of the results was communicated to the Electrical Society, but his work seems to have attracted little attention. "It is interesting to note that at the height of the Crosse furor (1837) no less an authority than Faraday stated... that similar appearance had made themselves known in the course of his own experiments."

"Should anyone in Tennessee or elsewhere" writes Commander Gould, "be brave enough, in the face of Crosse's experience to repeat his experiments, it may be useful to record here a caution noted by Crosse himself:

"I must remark. that in the course of these and other experiments, there is considerable similitude between the first stages of the birth of the acari and of certain mineral crystallizations electrically produced. In many of them, more especially in the formation of sulphate of lime, or sulphate of strontia, its commencement is denoted by a whitish speck: so it is in the birth of the acarus. This mineral speck enlarges and elongates vertically: so it does with the acarus. Then the mineral throws out whitish filaments: so does the acarus speck. So far it is

difficult to detect the difference between the incipient mineral and the animal; but as these filaments become more definite in each, in the mineral they become rigid, shining, transparent six-sided prisms; in the animal they are soft and have filaments, and finally endowed with motion and life."

Gould concludes by saying, that it is quite possible to 'grow' artificial forms from dead matter, which simulate living matter in a positively uncanny way - artificial plants formed by osmosis, that have every appearance of life, and osmotic growths that not only present a cellular appearance, but reproduce such functions as absorption of food, metabolism, and excretion of wastes. For himself, he "offers no opinion" on the Crosse experiments.

It is obvious that the work of Littlefield, Morley-Martin, Andrew Crosse, Weeks, Bastian should be correlated; to this should be added the California experiments of Professor Harry LaVerne Twining, recently deceased. Much work has since been done on the "electrical nature of life" and on mental and psychic energies, which may prepare the way for these neglected, but revolutionary studies of past decades.

#### PART VI - ADDENDUM TO THE MORLEY-MARTIN EXPERIMENTS-

##### Comment by the Trance Controls of Mark Probert:

On the 23rd of May (1948) the subject of the Littlefield experiments was briefly discussed prior to the seance. When the Control Lao-Tse appeared he expressed much interest in the matter, but said that it was unfamiliar to him, and that he wanted to investigate it before offering any comment.

On the afternoon of May 27 the former trance Control known as Natalli began to communicate clairaudiently to Mark Probert, who remained in full consciousness but spoke very rapidly. Natalli has described himself as an astronomer of the 16th century, who still pursues that branch of science. His brief communication obviously leaves much to be explained, but we set it down for whatever interest our readers may find in it. (Notes taken by Irene Probert):

"The mode of operation and application and final properties of substance after sterilization show that he (Morley-Martin) made a virgin field on which to create,

or (I should rather say) to make manifest a self-moving material or self-conscious life. The fact that he subjected this 'ash' substance to ultra-violet light, or to light of any kind, means that he charged the ash with magnetic energy, making the substance a splendid mould for teleportation in miniature. All then that was needed was infinitesimal amounts of ectoplasm, which consists of electromagnetic properties, and is used to form the body substance of the appearing or materializing animal or crustacean.

"This ectoplasm is in some instances drawn from the experimenter, or may be drawn from any source by an intelligent and interested entity who helped the thing to take place, as soon as he saw that Morley-Martin had made the proper field to start from.

"All life manifested itself out of intense heat. Before this became a solid it was an intense ball of gaseous heat - something far less substantial than the good Doctor's 'ash', and therefore far more complete in its sterilization state than anything one can imagine today. Man in his final substance is an IDEA, a thought of the Great Thinker, and consisted of what your friend Hilliard properly suspects and names ideo-atoms. These ideo-atoms are used to make moulds. Then these moulds are subjected to one of two intense polarities - heat, or cold. Both of these direct opposites can change places with one another - and indeed their act of changing causes another lowering of vibration, which becomes sound. Sound then becomes the virgin field for the life essence, because it creates a still lower vibratory rate known as electro-magnetic energy. This latter is acted upon either by the Mind of the Great Thinker or by his creative helpers called man, so that the energy creates substance on your plane of consciousness, or, in other words, fills in the ideo-moulds. -- This is all for the present - more anon.

Your friend and Helper in God -

Raymond Natalli -

## THE LITTLEFIELD EXPERIMENTS

- "M.M.M." - MAN, MINERALS and MASTERS -

The book to which our title refers carries the date of 1937; Flying Roll Editor has so far been unable to obtain the half dozen or so earlier works by the same author. The book as a whole is of the religio-mystical-occult order - one of those productions concerning which it seems impossible to form any intelligent opinion; it is simply 'there' like a two-headed calf, a kind of literary 'sport' which may have power and beauty and truth in it, but which escapes our powers of evaluation. But it so happens that "M.M.M." also contains some fairly definite instructions for certain curious experiments, which seem capable of repetition - and which should be verified by that means. These latter facts account for the present brief summary.

Dr. Charles W. Littlefield himself is described in a biographical introduction as a physician and surgeon, scientist and writer, and resident of Seattle, Washington. He is or was a Mason, a Church member, and a member of various medical societies, with 'high ranking as a general practitioner'. The first edition of "M.M.M." was for 5000 copies, and most of the 140 pages are devoted to the "Three Masters" and three Initiations the author is said to have experienced. Its purpose is described as "To show by demonstration and illustration that thoughts are things, and that their power may be expressed through certain mineral compounds" occurring in organic nature. Further, it is contended that "our thoughts may be formulated into charms or mantras according to a mathematical system" - and that by the use of these mantras - i.e., by meditation upon them - mental energy may be brought to bear upon the formation of microscopic crystals of organic salts; and that the crystals may be made to take specific and symbolic shapes by this means - all of which can be and has been photographed many times. Perhaps the most interesting feature of the book consists of these photographs. A few of them seem fortuitous, or their interpretation fanciful, but most of them are quite beyond any such explanation.

One must remember that these figures and symbols are formed in the field of a compound microscope, with a low power objective giving a maximum field diameter of 1/32 in., while the picture itself may occupy only 1/7 of the visible area. This disposes of the notion of any



tampering with the formations, and the micro-photographs give permanent and unbiased testimony of their existence. Finally, if the good faith of the experimenter be questioned, "any inquiring student" (according to the author) "can secure adequate proof" for himself by following the directions given.

The most sceptical scientist could not demand more rigorous conditions. The general principle involved fits in with what we now know of psychokinetic (PK) effects, and is much more acceptable a priori than it could have been in the earlier days of Dr. Littlefield's experiments. Some of the implications begin to appear, when we reflect that a similar picture-forming or molecular pattern-arrangement may take place in the cells of our bodies, in obedience to the operations of our minds.

"All illustrations in this book are photographs of MENTAL PICTURES" writes Dr. Littlefield. We simply list the sub-titles under some of these photographs: Initials of the First Master - "A" and "B" - of the Second Master, "C" and "I" - of the Third, "I" and "B" (result of meditating on the appearance of each Master and of asking for his initials). The Gate to the Holy City - The Tower of Creative Function (phallic symbol) - Head of the Sphinx - the Hieroglyphic Alphabet - The Cabin - Double Doors - Door with Cross - Stone Throne - Three Tibetans - Initiation Chair - Golden Laver - Great Pyramid - Woman in White - The Serpent - Persian Crown - Coronation Chair - Indian Head - Eagle and Shield - The Book Opened - Inside of the Book with Map of the United States - Right Foot - Left Foot - Crucifixion - Annunciation - Mt. Zion - Rosy Cross - The Dove - The Eye of God.

Many of these very striking formations have printed under them in the reproduction, the mantra used in the experiment. For example, the "Rosy Cross" formation appeared in the microscope field in response to meditation on the mantram Rosy Cross Wisdom Symbol. How are these mantrams formed? The author gives us complete instructions. First, the following tabulation:

1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I
J	K	L	M	N	O	P	Q	R
S	T	U	V	W	X	Y	Z	

Now assign the values and apply occult reduction: e.g., in the mantram given, Rosy Cross Wisdom Symbol, the numerical values for R - O - S - Y are 9 - 6 - 1 - 7,

which adds up to 23, and 23 adds up to 5. Values for CROSS are 3 - 9 - 6 - 1 - 1, which add to 20, and 2 plus 0 equals 2. The letters of WISDOM have values 5 - 9 - 1 - 4 - 6 - 4, which add to 29; 2 plus 9 equals 11, and 1 plus 1 equals 2. SYMBOL has the values 1 - 7 - 4 - 2 - 6 - 3, which add to 23, and 2 plus 3 comes to 5. Thus in this mantram, two of the words have the numerical value of 5 each, and two have the value of 2 each. It is necessary, in the formation of mantrams, by this method, that at least two of the words used have the same numerical value, obtained by occult reduction in the manner just indicated. If, as in the mantram quoted, the coincidence exceeds this requirement, so much the better. The obvious background for this, of course, is in the Qabalistic lore which attached number values to each letter, along with a great number of other correspondences, and laid therein the foundations of a practical and effective magic. Truly extraordinary results arise from the application of this idea, at least in Qabalistic practice; it is, moreover, a way by which the "true name" of any thing may be known, and power acquired over it. Dr. Littlefield asserts that he received the tabulation of the values from one of the Masters. I repeat here, for purposes of comparison, the letters and values of the Hebrew alphabet:

A	Aleph . . . .	1	K	Kaph	20,500
B	Beth	2	L	Lamed	30
G	Gimel	3	M	Mem	40,600
D	Daleth	4	N	Nun	50,700
H	Heth	5	S	Samekh	60
O)			Aa)	Ayin	70
U)	Vau	6	Ngh		
V)			P, Ph	Peh	80,800
Z	Zayin	7	Tz	Tzaddi	90,900
Ch	Cheth	8	Q	Qoph	100
T	Teth	9	R	Resh	200
I)				S, Sh	Shin - 300
Y)	Yod	10		T, Th	Tau - 400

Obviously, only the 1 to 10 values are of interest in this connection. A and B have the values of Aleph & Beth; L (3) is Lamed (30); D (4) is Daleth; O (6) is Vau; H (8) is Cheth (prn. Heth or Hett). Many similar tabulations are in existence, varying in details but rooted in some very fundamental occult laws. We know nothing, of course, of Dr. Littlefield's Master, but it would be foolish to disregard his tabulation merely on that account. Moreover, he used it in making his mantrams, and the mantrams apparently 'worked'.

Another mantra is a "Hebrew charm" - Personal Spirit Life Power. These four words reduce to the number values of 1 - 1 - 5 - 5. "It is not known beforehand what thought vibrations are set up by meditation on this mantra. So the writer places a drop of saturated solution of a mineral salt on the microscope slide, and while the water is evaporating from the drop I meditate on the mantra." The crystals are then examined, and if any letter or scene or object has appeared it is photographed through the microscope. Then it is known that the mantra sends out the vibrations of that object. If a sequence to the picture is desired, the name of the picture is embodied in another mantra, which is meditated upon-and the resulting second picture "is always a sequence of the first one."

It remains to note the "Practical Instructions" -- (p. 129) in preparation of the solutions. "From a wholesale drug house procure one ounce or more of each of the 12 mineral salts, known as tissue salts. These are:

Sodium chloride	silicon (silices)	Chloride of
		potash-
Fluoride of lime	sulphate of lime	sulphate of "
Phosphate of potash-	phos. of magnesia-ph.	of iron.
Phosphate of lime-	sulphate of soda-	phos. of soda

"Procure 12 1-oz. bottles with fresh corks, label, & into each put about 10 grains of one of the salts; fill with distilled water. Shake frequently (some are only slightly soluble). Remove a drop of any of the solutions to the microscope slide, place near small electric globe until water evaporates, then examine the crystals. Do this with each until you become familiar with their forms and differences. Then combine two or more solutions in one bottle, and evaporate and examine a drop on the slide. The slightest difference in the amounts of each solution will make the widest possible difference in the resulting crystals, and the experimenter should demonstrate this fact to his own satisfaction. . . In my own experiments I use sulphate of potash and sulphate of soda, one part of the former to 10 of the soda. When this combination forms crystals like the letters C, D, or O, then the solution of these salts is susceptible to mastery by my mind. Whether this would yield to the mental state of others I do not know.\* Experiment only can determine this. Other combinations of salts should be tried if this one does not produce results. . . In the writer's research it has been demonstrated over and over again, that when the mantra is taken into meditation, then the picture

appears in the mineral salts. . . It is also possible to use the mantra for meditation without the aid of the microscope and the salts. . . it is well to set up a rhythm of three - make your statement and repeat it three times, and again three times, until the condition or the thing you will to come into manifestation appears. The use of the mantra is merely working with the Law.... There must be faith. Believe that the thing you desire is now accomplished, whether its appearance is delayed or immediate makes no difference. . . Time is naught in the mind of God . . the desire may require the adjustment of many conditions...."

The last few lines of the above quotation indicate that Dr. Littlefield connects his experiments with the whole lore of mantra practice, meditation, and auto- and hetero-suggestion, too familiar and extensive to elaborate upon here. We emphasize chiefly two things: (1) The specific mode of forming an effective mantram (2) The way in which the working of the mantram - the mental energy directed by it - can be demonstrated experimentally by use of the mineral salts. Dr. Littlefield himself raises an important question in the passage starred above (\*): were the results with the mineral salts dependent on his own exceptional psychism, or can many other persons obtain them? Early in the book he asserts that anyone can verify them who will follow directions, but the present writer has not learned of any such verification. It should be attempted on the basis of a parapsychological experiment; rightly or wrongly, the mystical-Occult experiences and interests of the author vitiate his whole report so far as the average scientific worker is concerned, and it is only the parapsychologist who is capable of making an honest attempt to evaluate such phenomena.

Apparently the crystal formations are usually symbol-expressions of the subject-matter with which the mantram is concerned, and often reply to inquiries, and may be followed up in a series of questions - but the symbol which appears cannot be foreknown; it somewhat resembles thought-photography in cases where the subject is NOT thinking of anything in particular, yet definite forms appear on the sensitized plate (Fukurai, et cet.). What part of the human mind selects the symbol, and how is the operation carried on in dense matter? We are getting past the stage when it is all-sufficient answer to such questions, to mumble the magical word 'subconsciousness'. And if we knew how the physical part of the operation is effected we might

have a clue to PK effects in general; it seems likely at present that all these are to be expressed in terms of modification, or manipulation by psychic means, of areas of a universal magnetic field. Some types of telepathic phenomena may fall into this category also... And take note, if you please, of this casually delivered thunderbolt:

"Years later, while making some experiments... to discover the relation between mental states and those salts that produce clotting in case of hemorrhage, a living octopus was produced..." (our underscore). Another astonishing claim is that "the evaporation of water, a process universal on sea and land, generates a subtle magnetism which is the vital force of plants and animals."

"This force saturates the mineral salts of organic nature, making them susceptible to mental control, so that any picture that the mind accepts as true in principle may be fixed in them." "Everything", says the Doctor with sound philosophy, "begins with a mental image" and expresses the qualities of the image. The latter has the power to group the mineral salts in right proportions to build organic forms. The law of composition, of the grouping and apportionment of elements, controls all manifestation of all things on all planes." Now, all existence is probably expressible in terms of numbers, of the 1 to 10 digits (as, e.g., rates, waves, vibrations, units of some kind), and letters are no exception, have also a mathematical equivalent, and so do the words formed by them - from whatever source these equivalents may be derived (a word is mind-energy in form, may be a sound also). A mantram contains two or more words having the same numerical equivalent, and when meditated upon, the 'latent' energy passes into some form of manifestation. Such, if we understand correctly, is the 'secret' of the power of the mantram; at least it is suggestive and thought-provoking... And we hope, tho' probably in vain, that the crystallization experiments may be repeated and extended by other workers. M.L.

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BIO-GENESIS

Extracts from  
The Beginning and Way of Life, 1919

by  
Dr. Charles W. Littlefield, M.D.

Abstracted by BSR Associate Mark L. Gallert

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## BIO-GENESIS

Extracts from The Beginning and Way of Life by Dr. Charles W. Littlefield, M.D., 1919, abstracted by BSRA associate Mark L. Gallert.

1. Calcium Phosphate particles, evaporated, show life activities. To observe this vital force, put one grain of fine pulverized phosphate of lime into one-half ounce of distilled water, shake it well, place a drop of this solution upon a glass slide, and look at it through a microscope with a power of 750 diameters. As the phenomena take place within, and not upon, the surface of the drop, the nose of the objective must be inserted in the drop.

As soon as active evaporation of water begins, the fine particles of lime salt will become possessed of life. That is, they will have the power of independent motion and volition. No one seeing this for the first time, and wholly ignorant of its nature, could be persuaded that the drop is not "literally alive" with microscopic life. Indeed it is.

As these particles are watched, they are seen to undergo all sorts of movements similar to those commonly observed in a drop of water taken from a pool on a summer day. A close study of these two phenomena will convince anyone they are both due to one and the same cause, namely, the magnetization of the particles by evaporation of water. As these living particles increase in number they will be seen to attack, chase each other, undergo gyratory, swimming and other movements, showing every evidence of volition.

2. Evidence more marked in Silicic Acid. The power of volition is more marked with this substance than with phosphate of lime, especially two or three days after boiling if the bottle containing the solution is well corked in the meantime. Place one grain of silicic acid in a half ounce of distilled water; boil for five minutes; while yet boiling, place a drop of the solution on the glass slide and examine for motion. Inside of ten minutes the drop will be swarming with particles having life-like motion, with a much wider range of activity than those of phosphate of lime. The evidence of sensation is also more marked in the silicic acid than in those of phosphate of lime. As the fluid evaporates, they manifest every evidence of suffering--even to that of attacking their fellows in the general struggle to keep within the liquid.

The longer the silicic acid solution is kept, the more marked is the power of volitional movements and sensation. Drops of the solution should be examined every twenty-four hours for several days, to note the gradual increase of motive and volitional power. In trying this experiment, I would advise that the silicic acid be allowed to settle somewhat before a drop is taken out, that too many large chunks be not present which prevent movement of the living particles. These attack and feed upon the larger chunks of the acid, and in many instances drag them for quite a distance through the fluid. In observing these movements, be sure to insert the nose of the objective in the drop.

3. Living cells from Calcium Phosphate and Magnesium Phosphate. Having become satisfied that "physical life" is a form of energy, which is expressed through particular forms of matter, we may proceed to build living cells from mineral compounds. To do this, boil one grain of phosphate of lime in a half ounce of distilled water for ten minutes, in a six-ounce test tube, over an alcohol lamp; transfer to a half-ounce sterilized bottle, and cork tightly. Then boil one grain of phosphate of magnesia in a half ounce of distilled water for ten minutes, in another six-ounce test tube. (Large tubes are used to prevent boiling over.) Transfer this to a half-ounce bottle; cork tightly, label, and set both in a red light for five days, in a temperature of 70 or 80 degrees F.

At the end of this time, mix the solutions in a one-ounce sterilized bottle, cork and set aside for forty-eight hours in a red light; then examine the drops of the solution for living cells. In the experiments outlined above, the materials are prepared under the strictest test of the laboratory, and kept sterile until the chemicals are ready to be possessed by the vital force. Then living cells come into existence immediately on exposure to the air. They may be seen to originate from the minerals, undergo development, exhibit a wide range of movements, express volition and sensation, struggle and die, and return to the inorganic chemicals from which they came.

There is one thing which the close observer will not fail to see. Each living cell has a nucleus. This consists of lime particles possessed of the life-motion, as seen in our first experiment. This does not die at the death of the cell, but continues its life-like movement, as at first; and as both the electrons of the lime and the energy are indestructible, likewise the new life they manifest may also be eternal. Upon this fact, a thousand theories may be predicated. One thing, however, is self-evident--the life principle does not depend upon matter and its compounds for existence, but only for its manifestation, each mineral salt giving its own peculiar expression. It is also self-evident that the living cells are dominated by a magnetic force. The phenomenon of attraction and repulsion among them is very marked. They will come together and fly apart exactly as will two electrified bodies. This same relation seems to exist between them and the chemicals from which they originate. On first becoming possessed of life they linger for a time about the parent mass, then make wider and wider detours from it, until they become weaned away and leave it for independent existence.

Another phenomenon, very marked, is their gregarious habits. They are almost always found in swarms or flocks, in different parts of the drop of fluid in which they generate. This may be due entirely to magnetic attractions among them. Indeed, this may account for many of the relations of life heretofore wholly enigmatical, such as selfish, social and theistic emotions.



We can easily imagine a bar with negative and positive poles. Now if we can extend the image to a cross, two arms of which have these polarities, and the other two volition and sensation, we will have a clear idea of the properties of this force. Indeed, the salts, phosphate of magnesia, phosphate of lime, and phosphate of potash, which combine to give the fullest expression of these four basic principles of the vital force, build just such a cross. See Figure 40.

4. Addition of Potassium Phosphate changes the nature of form and movement of the cells. With very weak solutions of the mineral salts many interesting experiments may be made with these cells, which confirm these conclusions. Dissolve one grain of the mineral salt, needed for use, in a half ounce of distilled water, in a six-ounce test tube. Boil for ten minutes, cork and label.

By the use of phosphate of potash, these forms and their movement may be changed at will. To do this wait until a large number of living cells are generated, then add a small drop of the potash solution to the drop of liquid containing the cells on the glass slide. Immediately the cells lose their circular or oval shape, and become elongated and slightly curved. Soon after this they take on a whirling movement, followed by swimming, through the use of their elongated extremity, very much as a fish uses its caudal fin. Of the rationale of this sudden transformation in form and locomotion, I cannot speak with certainty. Phosphate of potash has a great affinity for water, and it may be this salt absorbs it from the living cells, thereby causing change. But this can hardly be true, since they are larger on the whole than before transformation. Since it is the tendency of this compound to build in curved lines, it is highly probable that it penetrates their structure and effects the change by change of composition and absorption of water. This would be in strict harmony with the law of form and function as illustrated elsewhere in this work.

5. Destructive effects of Sodium Chloride, and preservative effects of Iron Phosphate and Sodium Phosphate. The addition of a drop of sodium chloride solution will produce instant death of the cells, while they may be kept for days in a solution of equal parts of phosphate of iron and phosphate of soda, one grain of each to the ounce of distilled water. In the production of these living cells, we have demonstrated three things:

- a. The existence of a vital force, which is independent of the matter it affects.
- b. The Law, that composition determines form.
- c. The Law, that composition determines motion, sensation and volition.

In these experiments, we have used no compounds that were not on the earth

before life appeared. We have imposed no conditions which Nature did not. Yet we have observed the strictest rules of the laboratory. He who will carry out this single experiment, of producing these living cells from phosphate of lime and phosphate of magnesia and their modification by phosphate of potash, will be convinced of the origin of physical life by a new form of energy which dominates the mineral salts of organic nature.

6. How to vitalize the mineral salts so that they can be made to produce tissue fibers and life-forms. When the mineral salts of organic nature are charged with the vital force, they take on a radiate structure as shown in the illustrations. The number of evaporations necessary to effect this differs with each salt, but is generally one evaporation for each tenth part of molecular weight or fraction thereof as shown in the following table:

<u>Salt</u>	<u>Molecular Weight</u>	<u>Number of Evaporations</u>
Sodium Chloride	58.37	6
Silicic Oxide	60.22	7
Potassium Chloride	74.20	8
Calcium Fluoride	78.00	8
Calcium Sulphate	135.73	14
Potassium Sulphate	174.00	18
Potassium Phosphate	174.00	18
Magnesium Phosphate	246.00	25
Iron Phosphate	301.36	31
Calcium Phosphate	309.33	31
Sodium Sulphate	321.42	33
Sodium Phosphate	357.32	36

To prepare these vitalized salts for the treatment of disease, they are triturated (ground) with milk sugar--to the 6th decimal potency, one hour to each of the six triturations.

They are found in the tissues in this proportion, but no tests known to chemistry will detect them as thus prepared in milk sugar. Notwithstanding this fact, however, they are among the most powerful healing agents known.

Another interesting and important fact connected with this process of vitalization is, those salts that are otherwise insoluble in water are by the evaporation of water made soluble. This is a most valuable discovery from the standpoint of treating disease, as all the mineral salts must be dissolved in the blood before they are available to the tissue cells as food.

Comments on the photo-micrographs of the cell-salt formations in solution, before and after vitalization through evaporation.

	<u>Before Vitalization</u>	<u>After Vitalization</u>
Sodium Chloride	Cube-like structure	Radiate structure
Silica	Diamond crystalline form	Radiate web-like structure
Potassium chloride	Triangular crystal	Elongated forms
Calcium Fluoride	Small particles	Stiff, long stalks
Calcium Sulphate	Small particles like bacteria	Radiate structure
Potassium Sulphate	Short sticks	Long, vine-like forms (vines contain a high % of this)
Potassium Phosphate	Small specks	Radiate structure
Magnesium Phosphate	Small, dark particles	Long, willow-like forms
Iron Phosphate	Pattern-like traces of milk on side of a glass	Fern-like forms (ferns contain much of this salt)
Calcium Phosphate	Dry mass (insoluble)	Soluble and makes radiate crystal forms
Sodium Sulphate	Twigs	Bushy structures
Sodium Phosphate	Particles with no form	Elaborate bush-like structures

7. Nine of the salts each build cells--these cells unite to form tissue fibers. It is an important and interesting fact that at least nine of the mineral salts build cells which, by the union at their opposite poles, form tissue fibers. These are silicic acid, chloride of potassium, calcium sulphate, potassium sulphate, magnesium phosphate, iron phosphate, calcium phosphate, sodium phosphate and sodium sulphate. This I have demonstrated many times.

To make these experiments, put one grain of each salt in a separate half-ounce of distilled water. Boil in a six-ounce test tube, then transfer to a half-ounce bottle, cork tightly and set aside in a temperature of 80 to 90 degrees F. I used a closed box, about a foot square, with two small holes in the top. Through one is passed an electric cord to furnish light and heat by use of a thirty-two candle-power lamp; the other for the thermometer, which may be securely held in place by passing it through a rubber cork which fits the hole snugly. In from ten to twenty days tissues, peculiar to each salt, will be found growing at the bottom of the solutions.

The cause of this phenomenon I have not fully worked out. One thing, however, seems reasonably certain, it is due, in part at least, to the presence of free acid that forms the salt.

All of the salts, except silicic, are formed by the union of an acid with a base. For example, hydrochloric acid forms the chlorides; sulphuric

acid the sulphates; and phosphoric acid the phosphates. In boiling, a portion of this acid is set free, or is liberated afterwards through decomposition of the salt. The cells and tissues do not begin to form until the solutions show a slight acid reaction. For this reason, each solution should be tested with blue litmus paper immediately after boiling. If it is acid, it will turn the blue paper red. If it does not do this, a drop of the diluted acid which forms the salt should be added to the solution in the bottle--that is, sulphuric acid to the sulphates; phosphoric acid to the phosphates; hydrochloric acid to the chlorides. These may be had at any drug store by asking for the "diluted acid" of the one needed.

As soon as growth is observed in sufficient quantity for examination, take a portion of it from the solution with a wooden toothpick and place it upon a glass slide. Add a drop or two of the solution to float it, and place a cover glass upon it; then examine under the microscope. By this means, one may gain a definite knowledge of the kinds of tissue each salt will build. Most of them produce at least two kinds, one so nearly related in structure as to be often mistaken for that of some other salt. The salts which produce tissues similar in structure will unite in building compound tissues, or structures of a higher class. For example, different layers of the skin, or muscle, or of nerves and bone.

The method by which they build tissue fibers is also of interest and affords a striking example of the fact that magnetism plays an important role in this process. Within two or three days after boiling the solution, cells of various shapes and sizes will be found in this fluid. These units, end to end, coalesce and form fibers. See Figures 43 and 44.

The solutions must be examined daily to detect the process. In making examinations, always immerse the nose of the objective in the drop of solution, then search for cells and fibers. The cellular structure of the fibers illustrated is easily seen with an ordinary reading glass. The similarity and, in many cases, the identity of these fibers with those normally found in the human organism, make it almost certain that they are both due to one and the same cause.

In the chapter on the "vital force," reference is made to the fact that the three salts--phosphates of lime, magnesia and potash--which first give expression to this force as "life," build a cross form, each point of which, gives expression to one of the four functions of this force--attraction, repulsion, sensation and volition. See Figure 40. --- When the phosphates of lime and magnesia are charged with this force (from the process of evaporation) they build living cells which, uniting pole to pole, form tissue-fibers as shown in Figures 43 and 44.

While silicic acid, chloride of potash, fluoride of lime, sulphate of potash, phosphate of magnesia, phosphate of iron and phosphate of soda all form tissue-fibers from cells, yet they do not all give expression

to the four fundamental functions of this vital force. Most of them are limited to simple contraction and relaxation or attraction and repulsion between the cells which constitute the fibers. These primary tissue-fibers so closely resemble those found in the human body that there can be no question that both are produced from the mineral salts of the blood.

Figure 40. Life-cross. A cross-form built from the same combination of the phosphates of lime, magnesia and potash through which the vital force manifests all of its functions--attraction, repulsion, volition and sensation.

Figure 41. Generating living cells. A mass of vitalized phosphate of lime and magnesia from which living cells are generating.

Figure 42. Living cells growing. Living cells growing by reason of the addition of phosphate of potash. Several of the fully developed elongated cells can be seen in the picture. See Chapter 5.

Figure 43. A tissue fiber. A tissue fiber made by the union of cells through magnetic polar attraction.

Figure 44. A tissue fiber. A tissue fiber in the making. Recruits are seen approaching from the right-hand end.

Figure 45. Connective tissue. Connective tissue built from silicic acid. It is a well-known fact that this salt is a constituent of all connective tissue.

Figure 46. Lymphatic tissue. Lymphatic tissue built from the chloride of potash. No other remedy known is equal to this salt in healing diseases of the lymphatic glands and vessels.

Figure 47. Tendinous tissue. Tendinous tissue built from the fluoride of lime. This salt is the prince of remedies in diseases and sprains of the tendons.

Figure 48. Yellow elastic fibers. Yellow elastic fibers built from sulphate of potash. This salt is a well-known constituent of all elastic fibers.

Figure 49. Nerve tissue. Nerve tissue built from the phosphate of magnesia. It is this salt that expresses the function of volition of the vital force.

Figure 50. Muscle tissue. Muscle tissue built from the phosphate of iron. No other salt of the blood acts as readily or with the same curative power in diseases of the muscles as phosphate of iron.

Figure 51. Kidney tissue. Malpighian vessels of the kidneys built from phosphate of soda. The author has often cured organic diseases of the kidneys with this salt.

8. Grouping of salts in different proportions to form mineral prototypes of flowers, ferns and trees. After the mineral salts are saturated with the vital force, they may be grouped in different proportions to form a mineral prototype of any flower, fern or tree desired. The illustrations show the extent to which this can be done. After a given prototype is formed by the proper mineral composition, cells or seed will develop in the stems, from which an organic flower, fern or tree will grow identical in every respect to its mineral prototype. This is illustrated by Figures 38 and 39. These demonstrate the beginning of plant life on our earth.

9. Life-form production from combinations of tissue-salt solutions. In order to demonstrate, experimentally, the principles of life-form production, as here set forth, only a few simple apparatus are needed: a good microscope, a number of ordinary glass tumblers of about six-ounce capacity, plenty of distilled water, previously boiled, and the twelve mineral compounds of organic life. These I have already named in Chapter 2. Make a three per cent solution of common salt, and fill as many glasses as may be desired. I generally use twelve. Triturate together twelve miscellaneous combinations of the remaining eleven mineral compounds (the common salt being one), and place about ten grains in each glass of salt solution. Leave the glasses uncovered in a temperature of from 75 to 80 degrees F.

In order to study the process of form-building and organic development, we may use a couple of dozen round glass discs, about two inches in diameter, to be had at any novelty store, as little mirrors, from which the mercury can be removed by immersing them in nitric acid.

By means of a small glass rod or wood toothpick, place drops from these solutions at different places on the plates in such manner that each drop will retain its globular form. Place the plates where they will be surrounded with the glass tumblers, and also where active evaporation from the drops and from the glasses will go on. Leave them undisturbed for twenty-eight days. If the solutions have been properly made--they may be varied, after a little experience, to produce any form desired--there will be found, at the end of the normal period of gestation for each, a number of animal forms growing upon the plates.

In the production of these forms, the mineral salts were first vitalized by dissolving in water and placing drops of the solution on glass plates in suitable environment of light, heat and moisture. The drops are so placed as to retain a globular form in order to analyze the ray of light into seven colors. When the water dries away, more is added until by the process of repeated evaporation the salts become charged with the vital force.

After several days, droplets, like little cells, will remain in the region where the drop was placed. These undergo the ordinary process of cell division, until they develop into an organic form. This cell multiplication is shown in Figures 58 and 59. This, however, is not true from shell forms. They grow from droplets, as single cells, without undergoing the process of cell-division.

The ape-like form, shown in Figure 76, as well as the human form, shown in Figures 77, 78 and 79, was grown from salts found in Montana, where they evidently had been subjected to the process of evaporation for centuries.

10. Another technique of bio-genesis. In the early days before life-forms appeared, the earth was surrounded by a shell of water--the waters above the firmament. Within this shell, a green-house temperature was constantly maintained. As the earth cooled this water fell upon its surface, holding the mineral salts of organic life in solution. From these solutions crystalline forms built up, representing in mineral composition and outline every form of vegetation that was destined to grow upon the earth. By the process of evaporation, these mineral crystalline forms were saturated with vital magnetism, and in these crystal forms, nature's synthetic processes built up her first cells of bioplasm, not singly, not sparingly, but by millions, each cell capable of developing a distinct species of life-form as would be determined by its mineral composition.

In order to demonstrate experimentally this principle of abiogenesis, only a few simple apparatus are needed: a good microscope, varying in magnifying power from two hundred and fifty to eight hundred; a number of ordinary glass tumblers of about six-ounce capacity; plenty of pure boiled water; and the twelve mineral compounds essential to vegetable and animal tissues. These are the fluoride, phosphate and sulphate of lime; the phosphate of iron; the phosphate, chloride, and sulphate of potash; the chloride, phosphate and sulphate of soda; and the phosphate of magnesia and silicic acid.

Make a three per cent solution, by weight, of salt, and fill as many glasses as may be desired. I use twelve. Triturate together twelve different combinations of the remaining eleven cell salts and place about ten grains in each glass of salt solution. We now have twelve miniature oceans that will fairly represent the condition of the sea before life appeared upon the earth.

Pour into each glass one dram of bisulphide of carbon, and leave the glasses uncovered in a temperature of 75 to 80 degrees F., and replace from time to time with fresh water, previously boiled, the amount lost by evaporation, and we are ready to begin the work of creation. If we do not wish to study the phenomenon, we could leave the solutions untouched, as they will work out every form of life from mollusk to mammal.

In order to study the process of cell origin and organic development we may use a couple dozen round glass discs about two inches in diameter, to be had at any novelty store, as little mirrors, from which we can easily remove the mercury by immersing them in nitric acid.

By means of a small glass rod or wood toothpick, place drops from these solutions at different places on the glass plate, and place them in a good light, where active evaporation will go on. If no crystalline vegetable forms build up, add more soda salts to the solution from which the drops have been taken. If the foliage is too abundant, add less of the phosphate and more of the sulphate of soda, and repeat the experiment. The amount of foliage may always be determined by the phosphate of soda, and the size of trunk and limbs by the sulphate. When crystalline forms resembling well-proportioned vegetation are obtained, set the plate where a regular temperature of 75 to 80 degrees and a moist atmosphere surround the disc, and leave it undisturbed for twenty-eight days.

At the end of this time, a number of microscopic plants and animal cells will be found growing upon this plate. If, however, the plate is watched during this time, numerous small moist spots or droplets will be found scattered over its surface, from which small crystals develop, some of which grow into plant life and some develop animal forms.

11. Brain forms from the three sulphates. I called attention to the fact that the phosphates of lime and magnesia, and silicic oxide were the mineral salts upon which the vital force first acts in building living cells. I also called attention to the fact that sensation, a property of the vital force, is more marked in silicic oxide than in other salts. A review of the above paragraphs will reveal the fact that one of the three salts that first build living cells, is one of the determining salts of one of each of the temperaments.

The three sulphates--lime, soda, and potash--are the builders of connective tissue which form the basis of all organs and tissues and do not therefore enter into the determination of temperaments. Singular as it may seem, yet nevertheless true, these three salts are the most easily influenced by mind-images.

On examination of the brain we find it divided into two equal parts, each part being again divided into three departments, each department corresponding to one of the three temperaments just described:

Parietal lobes	-	motive temperament
Occipital lobes	-	vital temperament
Temporal lobes	-	mental temperament

In the last analysis, it is the mineral compounds which determine, in brain structure, the various transformations which ideas undergo, in the building and application of our more complex thoughts.



The brain, as a whole, depends upon the relative amount of the three sulphates: soda, lime and potash. The grouping of these determine the general form of the brain, and therefore the nature and trend of the mind that manifests through it.

Figure 87. Brain-form--Naturalist. If we mix the three sulphates in certain proportions, they will build a brain-form like the above. The mind manifesting through this brain would never, intentionally, do wrong or quit a duty. It would take very little interest in public affairs, but would be a passionate lover of nature--a naturalist.

Figure 88. Brain-form--Historian. If we slightly change the mixture of the three sulphates from that of Figure 87, adding less sodium, or more potash, the brain-form will also be different, as shown. The mind manifesting through this brain would naturally take note of events among men, and would delight in relating them in every detail. This is the brain of the historian.

Figure 89. Brain-form--Artist. In this brain-form, we have a fine illustration of the organs requisite to an artist. Constructiveness is indicated by the great width of the forehead. Experimentiveness by the outline of the sides. Perfectiveness by the width of the frontal lobes; and form and order by the distance between the lobes.

12. Fixing thought-images in matter. In the field of psychic research, no satisfactory working basis has heretofore been found--no field in which mind and matter meet.

During the past ten years, the author has carried out a very careful series of experiments to demonstrate the medium through which mind acts on matter and the condition under which the action takes place.

These experiments demonstrate that when the mineral salts of organic nature are charged (saturated) with the vital force, they become subject to mind control so that any picture the mind accepts, as true in principle, can be fixed in them.

This action takes place under the same conditions as those essential for the building of life-forms from these same mineral salts. If a drop of a solution of the three sulphates--those that build the brain forms as described in Chapter 3, Section One (or any single salt may be used)--is placed upon the glass slide of a microscope so that it retains its globular form (like a drop of dew on a blade of grass) and a ray of white light is allowed to fall upon it, the ray will be separated into its seven primary colors: red, orange, yellow, green, blue, indigo and violet. The red ray will occupy the border of the drop, the violet the center and the others the intervening space in their regular order.

If during the process of evaporation of the water, by which the mineral

salts are charged with the vital force, a mind-picture is believed, by the experimenter, to be controlling the grouping of the molecules of the salts as they crystallize from solution, that identical mind-picture will be found embodied in the salts at the close of the experiment.

In the fixing of thought-images in the vitalized mineral salts, I proceed in the same manner as in the building of living organisms. The mineral salt is first dissolved in distilled water, usually all the water will hold. A drop of this is placed upon the glass slide of the microscope so that it will retain its globular form, and the slide placed near an incandescent electric light. The thought-image to be fixed is mentally visualized--that is, it is seen by the mind while the eyes are closed--seen as an object now in existence. Doing this once, if only for an instant, is sufficient. When the water dries away leaving the crystalline salt on the glass slide, add another drop of pure distilled water and then another until through the process of evaporation the salt reaches that rate of vibration synchronous with the mind-image when the image will be found outlined in the grouping of the crystals. A simple image, like that of a fowl, Figure 81, fixed in common salt, required six evaporations. That of the sawmill mind-image, Figure 82, fixed in sulphate of potash, required eighteen evaporations. When the salts are combined, they require a larger number of evaporations than when only one is used.

The more complicated pictures--"The Creation" and "The Tree of Life"--required more than a hundred evaporations, before becoming sufficiently sensitized to respond to the image.

\* \* \* \* \*

## THE BION EXPERIMENTS OF DR. WILHELM REICH

Alison Davidson

Dr Reich's search for life energy, for the intangible, incomprehensible something which animates living matter, resulted in his bion experiments of 1937-39.

He discovered that during the disintegration of food and other organic matter, tiny luminous vesicles were produced that were capable of culture under very strict and sterile conditions. Under microscopic magnification of 2000-3000X these vesicles, or bions as Reich called them, moved through the microscopic field with pulsating movements and always showed a bluish color, no matter what substance they were derived from.

From "The Discovery of the Orgone" Reich lists the following facts for an understanding of the bions as they emerged during his experiments:

1. All matter - if exposed to high temperatures and made to swell - undergoes a process of vesicular disintegration.
2. High temperatures (autoclavation at 120°C, heating to incandescence, about 1500°C) destroy what life there is. But these same high temperatures produce the energy vesicles which in turn can develop into living bacteria.
3. The energy at work in the bions is not introduced into them artificially from the outside; rather, it originates from the vesicular disintegration of matter itself.
4. An energy vesicle is a minute quantity of matter, containing a quantity of energy derived from this matter.
5. The bions are not complete living beings, but only carriers of biological energy; they are forms of transition from non-living to living.
6. The blue color of the content is the immediate expression of this energy. As the blue disappears, the essential biological characteristics of the bions disappear also.
7. The bion experiments do not newly 'create' artificial life; they only demonstrate the natural process by which protozoa and cancer cells develop spontaneously from vesicularly disintegrated matter. They also demonstrate the natural form in which biological energy is contained in humus, in inorganic material, in foodstuffs, blood cells, gonadal cells, etc.

Dr Reich discovered that bions which emanate a strong blue glimmer kill or paralyze bacteria and small protozoa. They destroy cancer tissue by permeating it, even at a distance.

All of these functions pointed to enormous energies which are contained in the bions and have a powerful effect on their surroundings. How powerful these energies were Reich was to discover in his subsequent experiments with the SAPA bions, and their dramatic effect in his laboratory.

To completely refute the objections that so-called 'air germs' were a contaminating source of the life-forms emerging from disintegrating mineral and plant substances, Reich began to heat coal and earth crystals to incandescence before putting them into the solution which promotes swelling. Still the bions appeared, their formation accelerated by the intense heat.

"Now, with complete sterility sterility assured, the bionous disintegration of matter could be achieved within a few minutes. No longer did I have to wait for days or weeks until the process of swelling at room temperature finally result in bions...For more than 2 years, experiment after experiment confirmed the bionous disintegration of matter and the organization of bacteria and cells from the bions."

It was in January 1939 that one of Reich's assistants demonstrated the heating experiment to a visitor of the laboratory. Taking the wrong container from the sterilizer, she heated ocean sand instead of earth. After 2 days there was a growth in the solution which resulted in a culture of large, slightly mobile, intensely blue packets of energy vesicles. At 400X, they looked like sarcinae as occasionally found in water.

These bions Reich termed SAPA (sand, packet), and they showed some extremely interesting characteristics.

"The effect of the SAPA bions on protozoa, bacilli in general and T-bacilli in particular, was much stronger than that of other bions. Brought together with cancer cells, they killed or paralyzed the cells even at a distance of about 10 microns. When cancer cells came as close as that to the bions, they would remain as if paralyzed, in one spot; they would turn around and around in the same spot and finally become immobile. These phenomena were recorded by microfilm."

The effect of the SAPA bions on Reich himself was even more dramatic. During the winter of 1939 he studied the bions daily for several hours. His eyes began to hurt from looking into the microscope and he developed a violent conjunctivitis. Any close contact with the cultures resulted in pain and inflammation of the skin, and although Reich hadn't been in the sun during these winter experiments his body was strongly tanned. By now, Reich knew he was dealing with some kind of radiation.

He sought help from the radium physicist of the Cancer Hospital in Oslo, Dr Moxnes, who tested a culture with the radium electroscope. There was no reaction. Yet the radiation from the bion cultures seemed to be present everywhere in the laboratory. He tried observing the cultures in dark basement rooms, making dozens of cultures to increase the intensity. A grey-blue light permeated the darkness and violet light phenomena seemed to emanate from the walls.

One evening after spending several hours in the basement, Reich could see the blue glimmer visible as a slowly moving, grey-blue vapor around his body and other objects in the room. It was a frightening experience, for the radiation seemed to be everywhere and pervade everything.

Through subsequent experimenting with other subjects as well as himself, Reich came to the conclusion that the radiation had to do with sun energy. If it was present everywhere, it had to come from the sun.

"The SAPA bions had originated from ocean sand. Ocean sand, however, is nothing but solidified sun energy. The process of heating and swelling had liberated this energy from the matter. ...The existence of an energy with an extraordinarily intense biological activity could no longer be doubted."

He tried shielding the energy by building a metal-lined box in which he expected to be able to confine and control the radiation from the bions - a logical technical step to take under conventional concepts of radiation. But he was astounded to find that this box intensified the radiation effects. With this energy appearing everywhere and in everything, there seemed to be no defense against it. Reich realized that the energy was universally present, and that the bions had simply brought this energy into focus by local intensification.

In 'The Cosmic Pulse of Life' Trevor Constable comments further on these experiments:

"Dr. Reich identified this energy with the galvanic energies present at the skin surface. Later on in America (1939-40) he discovered the presence of the energy in the atmosphere as a primordial, mass-free energy. He found this same energy also present in blood that was allowed to disintegrate. The connection to the single spot of dried blood, held in a blotting paper as a tuning crystal in Dr. Ruth Drown's work, will automatically commend itself to the reader at this point. The two titans unbeknown to each other, were treading parallel paths.

"The presence of orgone energy in disintegrated blood verifies from yet another angle the access given to the life energy continuum by the much-ridiculed single spot of blood.

"Dr. Reich called this energy orgone to identify it permanently with things organic, with the orgasm and with life. He proved its existence visually, thermically, electroscopically, and later on, at the Geiger-Muller counter and by lumination in vacor tubes. He was able to develop protozoa from the bions. This led him into cancer research, impelled by the prevision that cancer might have a similar origin.."

It is a sad testimony to modern mechanistic science, that Reich's bion work and discovery of the orgone energy was subjected to hostility and irrational attacks by the established scientific and medical powers. Reich showed conclusively that life can form spontaneously from inorganic matter, that universal energy can be tapped and measured, that free from prejudice and sterile conditioning we can begin to explore and understand the source and expression of life energy. From that basis a new science is emerging from the dark cocoon of ignorance, affirming the connection that exists between everything in the universe just as the ancient life-affirming religions taught.

The FDA may have destroyed Reich, but just as he showed to the world life appearing out of inert matter, so the seeds of his research are flourishing in the crumbling fortresses of life-negating science.

Report on OROP ELLSWORTH in the Ellsworth American,  
July 8, 1953

## Rain Monday Night Caused By Rainmakers

The Orgone Institute of Rangeley, under the direction of Dr. Wilhelm Reich, conducted a rain-making operation in the Ellsworth area on Monday morning, July 6. Dr. Wilhelm Reich is the discoverer of Orgone Energy, the Cosmic Life Energy of the atmosphere, and is the Director of the Orgone Institute.

In preparation for the Ellsworth "Drawing" a preliminary "Drawing" was done on Sunday, July 5, at Orgonon in Rangeley, Maine, with some results in that region during the night of Sunday, July 5. The second "Drawing" was done in the Ellsworth region during the late forenoon of Monday, July 6. The "Drawing" operation was con-

ducted for a period of one hour and ten minutes. Cloud formations began to set in around 4 p.m. Monday afternoon with rain beginning at Ellsworth at approximately 10 p.m. Monday night, July 6. The rain came first in the form of a drizzle and later, around midnight, changed into a steady, gentle rain which continued until after 8:30 Tuesday morning.

The first experiments were conducted by the Orgone Institute in April of 1952, under the direction of Dr. Wilhelm Reich at Orgonon, Rangeley. The drought of last year was broken by this type of weather control upon August 2, 1952. While still being in the experimental stage, with many problems yet to be solved, the following operations seem to be work: rain-making, Rain-stopping, and Fog-lifting.

THE SECOND CHANCE  
by Albert Zock

Gone with the wind are Dr. Ruth Drown's contributions to the medical science in the thirties. As a student and co-worker of the Dr. Albert Abrams, M.D., of San Francisco, she invented the Radio-Vision Instrument which could be used to diagnose a patient's malady from only a drop of blood. This was based on the theory that the crystals within the blood acted like a Galena crystal in an old radio set, having and giving all information needed for diagnosis. The medical profession in her day laughed at this because it was too simple. Today, they are again confronted with a similarly simple phenomenon.

#### PICTURES IN THE BLOOD

Mrs. Hannelore Auras-Blanck, assistant to her husband Dr. Karlheinz Blanck in Germany, found a new and surprisingly accurate method of diagnosing complaints, long before they can be detected with methods used today. Almost from the beginning when she started to examine blood samples under a microscope, Mrs. Auras-Blanck noted a repeating of certain outlines within the blood picture of a patient which disappeared when the patient got well again. This phenomenon made her think. Did these contours have a meaning? To satisfy her curiosity, she improved the technique for bringing out the picture more clearly by adding a dye, the formula she has kept secret up to now. With this new process, she successfully diagnosed over 3,000 patients within 20 years.

The Auras-Copy, as it is called, has an accuracy of 90%, it not only puts a new and better tool in the hand of a physician, it can revolutionize the whole medical approach. The method is simple. Three to four drops of blood are treated and spread over the entire surface of a small glass plate, allowed to dry and fixed with alcohol. After that, Mrs. Auras-Blanck puts a dye on top of it. However, Mrs. Auras-Blanck noticed particular outlines at the beginning of her work, at a time when she was not using a dye, which means it should be visible even without knowing her formula.

#### DIAGNOSIS VIA CRYSTALIZATION

The examination was done under a microscope with a magnification of 1,000 times. Surprisingly, blood pictures will show outlines of inner organs and injured or affected body parts on this narrow glass surface, measuring only a few centimeters. When the narrow glass plate lies crosswise to the observer as is usual, the top of the long side corresponds to the head, eyes, nose, mouth, etc. and the bottom of it represents the legs, feet and abdomen; the short edges represent the left and right sides of the body. An outline of an organ within the topographical plane means it needs attention.

A second phenomena is the size of the outline: the larger it is, the more diseased is the organ, and surrounding area. Since the blood smear always gives a holistic view of the body's condition, a physician can at any time observe the degree of sickness or progress in healing. But that's not all! According to Mrs. Auras-Blanck, a Auras-Copy tells what lies ahead up to four months in advance. For example;

in one case, the Auras-Copy diagnosed thrombosis in the right thigh of a patient which was clinically proven four months later. In another instance, Mrs. Auras-Blanck diagnosed a cancer seven years prior to its outbreak, at a time when the patient was still healthy. Because of her experience, Mrs. Auras-Blanck can diagnose cancerous conditions even in a blood smear without the addition of dye.

## SIGNS AND SYMBOLS

Besides organs, there can be other signs and symbols appearing in certain locations, or over the whole body picture. Initially, Mrs. Auras-Blanck did not know whether or not they had any meaning. Then she got a hunch, that this might be pointing to disturbances in that region. After patient observations, her hunch proved to be right. A reddening around a trouble spot caused by the increase of erythrocytes (red blood corpuscles) shows the grade of an infection, which disappears when the condition improves. It is well known that a hyperactive thyroid gland often causes stomach disorders, but the Auras technique of diagnosing makes it visible for the first time, showing not only the shape of the stomach, but the nerves within the surrounding area, and the thyroid, since they are involved as well. An abdomen disturbance will give a similar picture. Beside the symbols of the affected organs, the outline of the thyroid appears also. The interpretation of the symbols is founded on Mrs. Auras-Blanck's 20 years of practice. This method can save a physician time and errors since the holistic diagnosis will give him an indication of how the applied remedy is working.

During the long years of experimentation, Mrs. Auras-Blanck and her husband tried to be as scientific as possible. She never knew more than the name of the patient until all treatments were completed. Even though her method of diagnosis has been tried curing these 20 years on over 3,000 patients, and proven to be 90% accurate, Mrs. Auras-Blanck is still reluctant to meet the public. A few reports have been published, but she feels the time is not ripe yet, because for one thing it represents a massive provocation of orthodox medicine, and secondly, her whole work could be jeopardized through the errors or negligence of a physician. Mrs. Auras-Blanck prefers to progress slowly by getting more and more earnest physicians interested in trying the method on their patients, letting her do the evaluation of the blood smears, until others have learned to do it as well as she. In this way the risk is minimized. Furthermore, her experience with physicians so far has shown, that many of them refuse to accept the outlines of organs and symbols of the blood picture even though this can be seen on photos as well. This rejection is mostly a psychological one, a subconscious fear of becoming useless, which is of course unfounded.

Mrs. Auras-Blanck foresees some difficulty in teaching others to read the symbols as she considers this to be the hardest part of the technique. As for a new illness she only needs to examine 3 to 5 cases to find the meaning of a new configuration, but a neophyte would of course lack the prerequisite expertise. A person capable of processing blood samples can acquire this skill; no psychic ability is involved, it is only a question of time and accuracy. The only mystery is why and how these miniature pictures of organs appear at all? Other difficulties are the high price of optical equipment, and the lack of



reliable co-workers. Since she doesn't have the necessary funds to hire assistants, her husband is the only help she has. The Auras-Copy may pose a challenge to the physician of today, yet it should be accepted as it puts a new tool in his hand, capable of both lightening his task and stretching his capabilities, as well as drying many tears. Will the medical profession grasp this opportunity, or will they reject it as before and continue to sleep on their laurels.

Yet the possibilities inferred by the Auras-Copy should not come as a surprise to practitioners who have witnessed the development of DNA research. This phenomenon is only another example of nature's holistic way and should not surprise us as it is known that each cell carries a blueprint which enables it not only to duplicate itself, but to build a whole new body from whence it came.

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January, 1922 Popular Science

## Mysterious Rays from Human Eye Move Solenoid

**W**ILL science soon reveal the nature of a mysterious power of the human eye more amazing than sight itself?

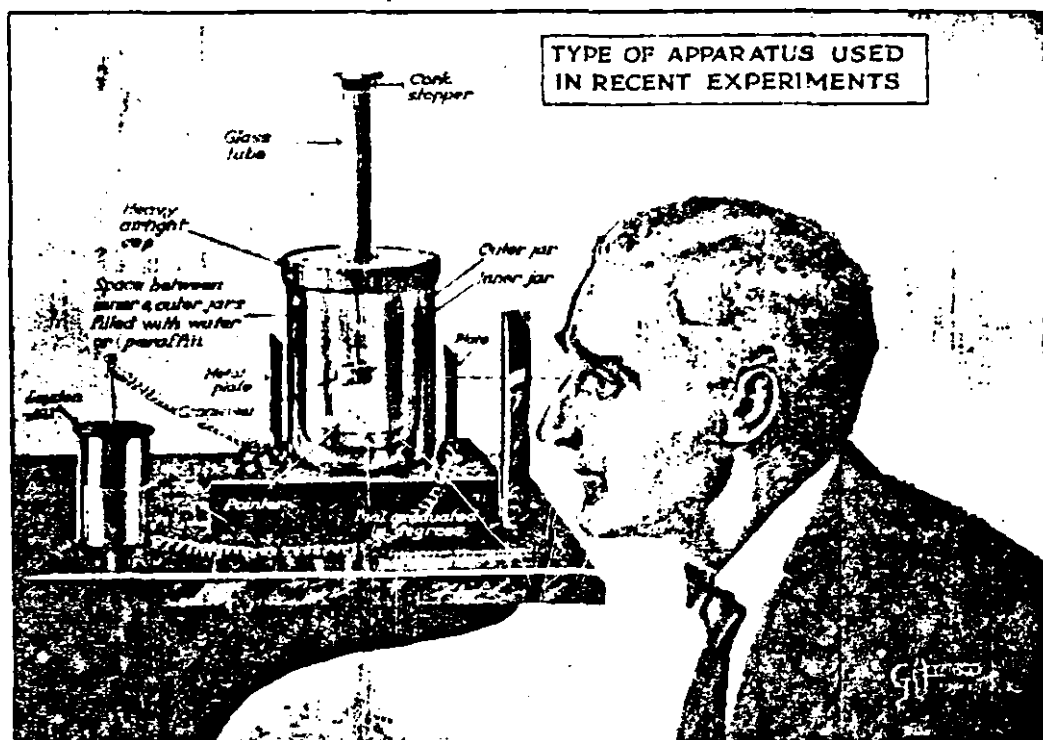
Probably every one has experienced an almost intolerable sensation under the prolonged stare of another person's eyes. If one person looks into another person's eyes, one of them must at last avert his gaze.

Dr. Charles Russ, an eminent British bacteriologist, has constructed a device which he believes conclusively proves that the human eye possesses an invisible energy, powerful enough to move objects.

A delicate solenoid of fine copper wire wound on a celluloid cylinder is suspended from an unspun silk fiber fourteen inches long. The upper end of the silk is attached to a cork placed in the end of a long glass tube and the lower end is fastened in a metal yoke near a small electromagnet. The object is to bring the solenoid to rest after it has been set in motion.

The entire system is enclosed in a double glass jar, covered with metal leaf. The space between the jars is filled with water or paraffin lest the bodily heat of the experimenter should influence the result.

On each side of the vessel the metal coating is scraped from one small spot. These openings are faced by insulated metal plates connected with a Leyden jar, which places an electrical potential



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Drawing by G. H. Davis

Dr. Russ's apparatus consists of a double glass jar containing a solenoid that is free to turn when the vision is directed through the slit

across the air space inside the double vessel. Another opening is made for the eye.

If the experimenter looks at one end of the solenoid as soon as the plates are charged, it will turn away from him, says Dr. Russ. If he looks at the other end, that end will move away. No motion results if the eyes rest on the center. To enable the observer to more easily watch the effect, a pointer hung

from the solenoid moves over a dial graduated in degrees.

Dr. Russ believes there is a ray of force propelled from the eye in the act of vision, which produces a tiny electric charge on the swinging solenoid. Of the nature of this energy he is not certain, although, since no effect is obtained in the dark, he thinks that the "emanation" is a refraction or a concentration of some unknown ray in light.

